

Cell models to evaluate p53:MDM2 inhibitors activity

Technology Overview

p53 wild-type cell models were successfully engineered for Twist expression control to be used for p53:MDM2 inhibitors testing. Twist GAIN-of-function and LOSS-of-function cell models were developed and used for preclinical p53:MDM2 inhibitors evaluation, preliminarily demonstrating that the expression of Twist hampers their efficacy. These findings support patient stratification on the basis of twist expression for treatment of a large fraction of sarcomas but also of a fraction of carcinomas. (Piccinin et al., Cancer Cell, 22, 404-415, Sept 11 2012).

Technology Application

The main application is to evaluate activity of p53:MDM2 inhibitors in preclinical phase. These cell models can be used also as research tools to explore p53 inactivation mechanisms in TP53 wild type tumors, and to study MDM2i resistance mechanisms.

Development Stage

3 different cell lines were consistently characterized.

2 more cell lines are producing promising results.

6 different drugs have already been tested including nutlin3a - AMG 232 - RG7112 - SAR405838.

More than **100** cell vitality tests have been performed.

Unit of Functional Oncogenetics and Oncogenomics

The research unit directed by Roberta Maestro has deep knowledge on p53 inactivation mechanisms in TP53 wild type tumors and owns solid knowhow on the generation of gain/loss-of-function cell models.



Looking for

We are looking for a partner interested in the **commercialization** of the products as **research tool** and/or for drug screening in **preclinical phase**.